

Fabriform Mattress

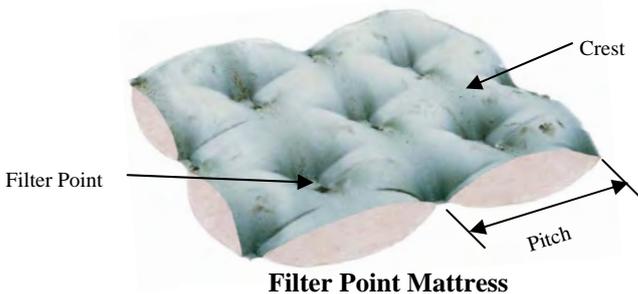
This sheet briefly outlines both the structure of the **Fabriform** mattresses, and the procedure for their fabrication and installation. In this process micro-concrete or other settable fluids are pumped into flexible fabric forms. The permeability of the fabric allows excess mixing water to pass out through the shutter resulting in a concrete which has a high strength, density and resistance to abrasion whether constructed above or below the water.

Fabriform mattress can be fabricated to any shape or size. Other applications include fabric formwork for underwater structures, pile jackets, pipe surrounds and repairs

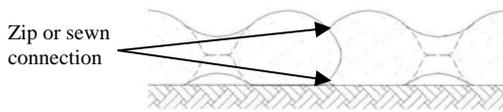
- **Fabriform Mattress**

There are two main types of mattress these are *Filter Point Mattress* and *Constant Thickness Mattress*

The most widely used type of mattress is Filter Point Mattress. The double layer fabric is woven together at regular intervals to join the fabric layers and also form filter points, which act as weep holes when the mattress is in service.

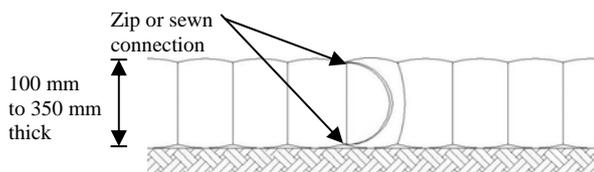


Filter Point Mattress



Section Through Filter Point Mattress Joint

Constant Thickness Mattress is formed from having the two layers of fabric woven, with ties of various lengths connecting the layers in order to control the thickness when the mattress is filled.



Section Through Constant Thickness Mattress Joint

Panel joints are made by stitching both top and bottom layers of fabric. Mattress joints have a zip connection to the top and bottom layer. When filled, both panel and mattress joints take the form of a ball and socket which allows some articulation of the revetment along the line of the bank.

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Fabriform

- **Mattress Fabrication and Installation**

Taking as an example the use of the **Fabriform** Filter Point Mattress for the erosion protection of an earth slope partially underwater, the procedure is as follows.

Mattresses are fabricated in our workshops by joining together sufficient panels of woven fabric to form a mattress of a convenient size for handling, commonly 70 m² (50 kg). Each mattress is laid in position on a prepared stable slope, and anchored at the top, usually by means of a scaffold tube inserted into a fabric envelope which is attached to the edge of the mattress during fabrication. Proper allowance must be made at this stage for the filling contraction which occurs as the mattress is filled.



The mattress is then filled by pumping micro-concrete through filler sleeves which are integral to the mattress, uniformly and at the correct rate. Filling is controlled to ensure each panel is completely filled and the fluid head does not exceed 2 m. A job specific Installation Guide is produced for each project. Engineers assistance on site is available.